

I claim

1. A computer system with parallel sever architecture, comprising a CPU, memory and I/O interface; the computer system further having:

a common device driver unit for managing the I/O interface of at least one
5 common device of the computer system;

at least one application module unit runnable on the computer system and comprising hardware and software to perform certain function with the help of the common device in the common device driver unit; and

a message exchange unit functioned as message interface of the common
10 device driver unit and the application module unit; wherein

the common device driver unit is in same hierarchy as each of the at least one application module unit, the communication between the common device driver unit and each of the at least one application module unit is controlled by the message exchange unit.

15 2. The computer system with parallel sever architecture as in claim 1, wherein each of the at least one application module unit has at least one personal device to perform specific function.

3. The computer system with parallel sever architecture as in claim 1, wherein the at least one application module unit can issue requests to the
20 common device driver unit through the message exchange unit for accessing the common device, the common device driver unit schedules the requests and replies the requests by priority.

4. The computer system with parallel sever architecture as in claim 1, wherein each of the at least one application module unit further comprises an

application memory and I/O map and a basic service routine device driver for providing auxiliary functions to access all service tasks provided by the common device driver unit.

5 5. The computer system with parallel sever architecture as in claim 1,
wherein the common device driver unit can be integrated into a chip or modularized.

6. The computer system with parallel sever architecture as in claim 1,
wherein the at least one application module unit can be integrated into a chip or modularized.

10 7. The computer system with parallel sever architecture as in claim 1,
wherein the common device driver unit has a message exchange buffer to read request from the common device driver unit and send a reply to the common device driver unit.

15 8. The computer system with parallel sever architecture as in claim 1,
wherein the at least one application module unit has a message exchange buffer to read request from the application module unit and send a reply to the application module unit.

20 9. The computer system with parallel sever architecture as in claim 1,
wherein each of the at least one application module unit and the common device driver unit can not read data or execute program of each other without permission.